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| 10/047,543      | 01/15/2002  | Andrei Viktorovich Grebennikov | 17778               | 4982             |

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EXAMINER

NGUYEN, KHAI M

ART UNIT PAPER NUMBER

2819

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/047,543

Applicant(s)

GREBENNIKOV ET AL.

Examiner

Khai M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,6-15 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,8-13,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 3,6,7,14,15,18,21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kuroda (US 6,326,842). Kuroda discloses (see, for example, Fig. 3B) an amplifier comprising:

a first stage (A) having at least two power states (11-14) comprising power devices coupled in parallel, the first stage having an input port, a control port, and an output port;

a second stage (C) having at least two power stages (31-38) comprising power devices coupled in parallel, the second stage having an input coupled to the output of the first stage via a coupling stage B (21), a control port and an output port; and

a state determination circuit/bit controller circuit (41) coupled to the control ports of the first and second stages for selectively configuring the first and second stages (line 58 of column 6 to line 60 of column 7).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 8-9, 11-13, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda (US 6,326,842) in view of King et al. (US 2002/0021169 A1).

Regarding claims 2, 8-9, and 11-12, Kuroda teaches the claimed invention except for the output impedance matching network (see, for example, Fig. 3B and column 6, lines 43-50). King et al. teaches (see, for example, Figs. 1 & 4) an amplifier comprising an output impedance matching network (106/400) comprising: transmission lines, diodes, capacitors,... ([0033]), and having at least two impedance matching states ([0040]), input ports, an output port, and a control port for receiving a control signal from a state determination circuit (108), and being coupled between output ports of an amplifier stage and a load (at terminal 128). Accordingly, the inclusion of the output impedance matching network/circuit as taught by King et al. reference in the amplifier as taught by Kuroda would have been obvious because it is known to use an impedance matching network at an output terminal of an amplifier to provide proper output impedance to a load.

Regarding claim 13, Kuroda discloses (see, for example, Figs. 3B & 8A-B) an amplifier comprising:

a first stage (A) having at least two power states (11-14) comprising power devices coupled in parallel, the first stage having an input port, a control port, and an output port;

a second stage (C) having at least two power stages (31-38) comprising power devices coupled in parallel, the second stage having an input coupled to the output of the first stage via a coupling stage B (21), a control port and an output port; and

a state determination circuit/bit controller circuit (41) coupled to the control ports of the first and second stages for selectively configuring the first and second stages (line 58 of column 6 to line 60 of column 7).

Kuroda only lacks to disclose an output circuit comprising at least two impedance matching states and having a control port, an output port for coupling to a load, and coupling to the state determination circuit.

King et al. teaches (see, for example, Figs. 1 & 4) an amplifier comprising an output impedance matching network (106/400) comprising: transmission lines, diodes, capacitors,...([0033]), and having at least two impedance matching states ([0040]), input ports, an output port, and a control port for receiving a control signal from a state determination circuit (108), and being coupled between output ports of an amplifier stage and a load (at terminal 128). Therefore, the inclusion of the output impedance matching network/circuit as taught by King et al. reference in the amplifier as taught by Kuroda would have been obvious because it is known to use an impedance matching network at an output terminal of an amplifier to provide proper output impedance to a load.

Regarding claims 19-20, the methods therein the claimed invention are essentially the same scope as apparatus of the above rejected claims. Therefore, they are similarly rejected.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda (US 6,326,842) in view of King et al. (US 2002/0021169 A1) as applied to claims 1-2 above, and further in view of Wang et al. (US 6,326,849). Kuroda in view King et al. teaches the amplifier of claims 1-2 except for an input matching circuit coupled at the front end of the amplifier. Wang et al. reference discloses an amplifier comprising cascaded amplifier, input, interstage, and output matching circuits (see Fig. 3). Therefore, the inclusion of an input matching circuit as suggested by Wang et al. at the front end of the amplifier of Kuroda would have been obvious because it is known to use an input matching circuit to provide a stable input for an amplifier.

#### ***Allowable Subject Matter***

6. Claims 3, 6-7, 14-15, 18, and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Prior Art***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclose (see the attached PTO-892).

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 703-605-4244. The examiner can normally be reached on 8:30 to 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Tokar can be reached on 703-305-3493. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703- 872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-6789.

KN  
September 16, 2003

A handwritten signature in black ink, reading "Michael J. Tokar". The signature is written in a cursive, flowing style.

Michael Tokar  
Supervisory Patent Examiner  
Technology Center 2800